

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Smith, et al.

Serial No. 10/575,117

International Application No. PCT/GB04/04328

Filed: 10/11/2004

For: EXTENDIBLE MAST

Attorney Docket No: 3174.00017

Petition Under 37 CFR 1.47 to Accept Declaration with Unavailable Inventor

MAIL STOP PCT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in response to the Notice of Missing Requirements Under 35 U.S.C. 371 in the United States Designated/Elected Office dated March 1, 2007. Applicant respectfully requests that the Declaration be entered with this Petition based on the Statement of Facts below. The petition fee of \$200.00 as required under 35 CFR §1.17(g) is enclosed. Applicants hereby petition for a five-month extension of time within which to respond to the outstanding Notice. Granting the petition would extend the time for filing the Response to October 1, 2007. The appropriate petition fee of \$1,080 is enclosed herewith.

Statement of Facts:

Kohn & Associates (law firm) sent a letter dated April 13, 2006 (Exhibit A) to Rachel Wallis at Withers & Rogers (associate law firm in the United Kingdom) enclosing a Declaration and Assignment forms for the inventors Alan Smith and

Peter O'Toole to sign and return as soon as possible, and notified Ms. Wallis that the USPTO will require submission of the Declaration in approximately two months.

Ms. Wallis sent a letter dated May 11, 2006 (Exhibit B) back to Kohn & Associates enclosing the declaration and assignment forms signed by Peter O'Toole, as well as a previous assignment signed in 2003 by Alan Smith. Ms. Wallis stated that the client (Janile Limited) was no longer able to contact their employee Alan Smith. Conversations were had between Kohn & Associates and Ms. Wallis, and it was decided that Ms. Wallis would look into the reasons why Alan Smith could not be located.

Kohn & Associates received the above referenced Notice (Exhibit C) on March 5, 2007. After the Notice was received, attorney Amy Rinaldo of Kohn & Associates was handling the matter, and left the firm in May 2007. Sheryl Fox, an administrator with Kohn & Associates, went through Ms. Rinaldo's files after her departure and found that the Notice was due without extension on May 1, 2007 and promptly emailed Ms. Wallis on May 14, 2007 (Exhibit D) that Kohn & Associates were still awaiting Alan Smith's signature. Ms. Wallis replied by email (Exhibit D) that she was still trying to get a response from Alan Smith by way of the client Janile Limited. Ms. Fox sent follow-up emails dated July 11, 2007; August 6, 2007; and September 28, 2007 (Exhibit E) prior to the final extension date of October 1, 2007.

Telephonic discussions took place between Kohn & Associates and Ms. Wallis on October 1, 2007. Ms. Wallis stated that despite regular requests for the location of Alan Smith and any updated contact information in order to obtain his signature from both Janile Limited and co-inventor Peter O'Toole, and contacting his last known address, no further information could be obtained regarding Alan Smith. Janile Limited had stated that Alan Smith had, since the signing of the Assignment in 2003, retired from the company, moved, and had left no forwarding address. Kohn & Associates and Ms. Wallis decided that this petition should be filed to accept the Declaration with the signature of Peter O'Toole since Alan Smith is unavailable for a signature, as October 1, 2007 is the last

date of the fifth month extension in which a Declaration could be filed without irreparable damage to the parties by abandonment of the application.

Alan Smith's last known address, as listed on the Declaration, was:

Thornegrove and Aljon Engineering
108-118 Wellington Road
Forest Gate
London E7 8BDU


Summary of Timeline

4/13/2006	Declaration and Assignment prepared and mailed to Withers & Rogers
5/06/2006	Ms. Wallis of Withers & Rogers returns Declaration and Assignment with only signature of Peter O'Toole
5/06/2006 onward	Ms. Wallis repeatedly tries to find contact information for co-inventor Alan Smith
3/05/2007	Notice of Missing Requirements received by Kohn & Associates
5/14/2007	Ms. Fox emails Ms. Wallis requesting Alan Smith's signature
5/14/2007	Ms. Wallis replies she is still trying to find contact info
7/11/2007	Follow-up email by Ms. Fox to Ms. Wallis
8/06/2007	Follow-up email by Ms. Fox to Ms. Wallis
9/28/2007	Follow-up email by Ms. Fox to Ms. Wallis
10/01/2007	Discussions between Kohn & Associates and Ms. Wallis regarding unavailability of Alan Smith and decision to make petition

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.

Respectfully submitted,

KOHN & ASSOCIATES, PLLC

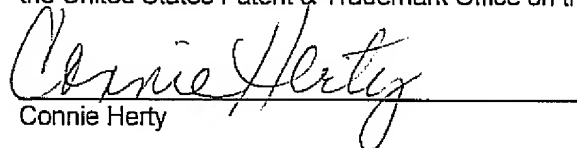

Kenneth I. Kohn, Reg. No. 30,955
Customer No: 48924

Dated: October 1, 2007

CERTIFICATE OF ELECTRONIC FILING VIA EFS-WEB

Date of Electronic Filing: October 1, 2007

I hereby certify that this correspondence is being electronically filed with the United States Patent & Trademark Office on the above date.


Connie Herty

KOHN &
ASSOCIATES
P • L • L • C
Intellectual Property Law

The information contained in this facsimile and all related pages, if any, is confidential and/or privileged and intended only for the use of the individual or entity named herein. If you have received this communication in error, please contact us immediately and return the original message to us. Any use, dissemination, distribution or copying of this communication is prohibited.

CONFIRMATION ☒ via mail
☐ via courier
☐ will not follow

April 13, 2006

KENNETH I. KOHN, Ph.D.
DEBORAH J. BARNETT, M.S.[†]
[†]admitted in New York
AMY E. RINALDO

Of Counsel
WILLIAM H. HORTON
LINDA M. WATSON

011-44-20-7663-3550

Rachel Wallis
Withers & Rogers
Goldings House
2 Hays Lane
London SE1 2HW
UNITED KINGDOM

Re: New United States National Phase Patent Application
Claiming priority to International Application
PCT/GB04/004328, filed 11 October 2004
For: EXTENDIBLE MAST - Smith, et al.
Our File No.: 3174.00017

Dear Rachel:

We prepared and filed the above-identified national phase patent application in the United States Patent Office, April 7, 2006, which included filing a preliminary amendment. A copy of the application as filed is enclosed for the integrity of your files.

Also, enclosed herewith are Declaration and Assignment forms for the signature of the inventors. Please return the executed documents to us as soon as possible. The United States Patent Office will require submission of the Declaration in approximately two months.

Please be advised that under United States patent law, we have a duty to disclose to the United States Patent and Trademark Office any patents, publications or other materials that are relevant to the above-identified application. If you are aware of any such materials, please forward them to us immediately for filing with an Information Disclosure Statement. If the Information Disclosure Statement is filed after receipt of a first Office Action on the merits, we must pay a surcharge. We expect a first action to be within the next 12-14 months. If we do not hear from you by **July 10, 2006**, we will assume that there are no materials to be submitted in an Information Disclosure Statement at this time. However, keep in mind that our duty of disclosure continues throughout the prosecution of this application.

30500 Northwestern Highway • Suite 410 • Farmington Hills, Michigan 48334-3179 USA

Phone: +1-248-539-5050 • Fax: +1-248-539-5055 • E-mail: kohn@kohnonline.com

Please visit our website: www.kohnandassociates.com

If you have any questions regarding the above, please do not hesitate to contact me. In the meantime, enclosed please find our Debit Note.

Very truly yours,

KOHN & ASSOCIATES, PLLC

A handwritten signature in black ink, appearing to be "K. Kohn", written over a horizontal line.

Kenneth I. Kohn

KIK/ch
Enc.

Dr Kenneth I Kohn
Kohn & Associates
30500 Northwestern Hwy
Suite 410
Farmington Hills
Michigan
48334-3179
United States of America



Our Ref: P511580US-PCT/NRW/lh

Your Ref:

11 May 2006

BY COURIER

10/575,117

Dear Ken

New US Patent Application
based on International Patent Application No. PCT/GB04/004328
Extendible Mast
Janile Limited

Please find enclosed the declaration and assignment forms for this application signed by one of the inventors, Peter O'Toole. I also enclose an assignment that was prepared before the UK application from which this application claims priority was filed. That assignment is signed by the second inventor, Alan Smith, on behalf of his company, Thornegrove & Aljon Engineering. Unfortunately, the applicant is no longer able to contact Alan Smith. Will it be possible to proceed based on the documents enclosed, or will it be necessary to obtain a further signature from Alan Smith?

I look forward to hearing from you.

Best regards.

Yours sincerely

Rachel Wallis
WITHERS & ROGERS LLP

Encs

Declaration and assignment forms

Rel. 7 (2006) LLP

Partners: David Bannerman, Michael Blatchford (Chairman), Adrian Chettle, Jeff Hogg, John Dean, Ben Dempster, Karl Barnfather, Simon Beck, Howard Wright, John Jones, Fiona McBride*, David Elsy, Ivor Harrison, David Pratt, Mark Armitage*, Colin Jones, David Croston, Adrian Tombling, Laurel McBray*, James Gray, Callum Wardle, Matthew Gillard, Jim Ribeiro, Nicholas Wallin, Nicholas Jones, Withers & Rogers Group LLP
* MITMA. All other partners CPA & EPA.

Associates: Russell Barton, Rachel Wallis, Kathryn Cruse, Paul Foot, Keith Tart, Andrew Thompson, Rhiannon Turner, Matthew Allen, David McWilliams, Shelley Lunn, Rachel Williams, Marisa Foster, Chris McDonald

Translations: Rosemary Booth, EP Formalities: Karen Austen

Practice Director: Nick Dougan, Financial Controller: Ian Smith, HR & Admin: Sonia Greaves

Withers & Rogers LLP is a limited liability partnership registered in England and Wales (registered number OC310992) with its principal place of business and registered office at Goldings House, 2 Hays Lane, London, SE1 2HW

Also at 1 Redcliff Street, Bristol BS1 6NP Tel: +44 (0)117 925 3030 Fax: +44 (0)117 925 3530
60 Holly Walk, Leamington Spa, Warwickshire CV32 4JE Tel: +44 (0)1926 336111 Fax: +44 (0)1926 335519 and
75 Colmore Row, Birmingham B3 2AP Tel: +44 (0)121 245 3900 Fax: +44 (0)121 245 3930



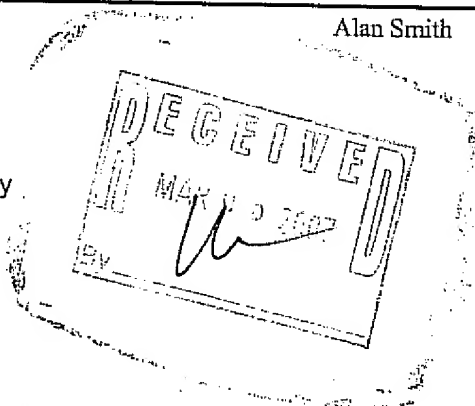
UNITED STATES PATENT AND TRADEMARK OFFICE

5-1-07

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/575,117	Alan Smith	317400017

Kenneth I. Kohn
Kohn & Associates
30500 Northwestern Highway
Suite 410
Farmington Hills, MI 48334



INTERNATIONAL APPLICATION NO.	
PCT/GB04/04328	
I.A. FILING DATE	PRIORITY DATE
10/11/2004	10/09/2003

CONFIRMATION NO. 9263
371 FORMALITIES LETTER



OC000000022699125

Date Mailed: 03/01/2007

NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US)

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as a Designated / Elected Office (37 CFR 1.495).

- Indication of Small Entity Status
- Copy of the International Application filed on 04/07/2006
- Copy of the International Search Report filed on 04/07/2006
- Preliminary Amendments filed on 04/07/2006
- Oath or Declaration filed on 04/07/2006
- Request for Immediate Examination filed on 04/07/2006
- U.S. Basic National Fees filed on 04/07/2006
- Priority Documents filed on 04/07/2006
- Specification filed on 04/07/2006
- Claims filed on 04/07/2006
- Abstracts filed on 04/07/2006
- Drawings filed on 04/07/2006

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

- Oath or declaration of the inventors, in compliance with 37 CFR 1.497(a) and (b), identifying the application by the International application number and international filing date. The current oath or declaration does not comply with 37 CFR 1.497(a) and (b) in that it:
 - is not executed in accordance with either 37 CFR 1.66 or 37 CFR 1.68.

ALL OF THE ITEMS SET FORTH ABOVE MUST BE SUBMITTED WITHIN TWO (2) MONTHS FROM THE DATE OF THIS NOTICE OR BY 32 MONTHS FROM THE PRIORITY DATE FOR THE APPLICATION, WHICHEVER IS LATER. FAILURE TO PROPERLY RESPOND WILL RESULT IN ABANDONMENT.

The time period set above may be extended by filing a petition and fee for extension of time under the provisions of 37 CFR 1.136(a).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
<https://portal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html>

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at <http://www.uspto.gov/ebc>.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

PAULETTE R KIDWELL



Telephone: (703) 308-9140 EXT 216

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/575,117	PCT/GB04/04328	317400017



Message

From:  Sheryl Fox
Subject: Re(2): US 10/575,117 Y/R P511580USPCT O/F 3174-17
To:  Rachel Wallis <rwallis@withersrogers.com>
Cc:

Thanks, Rachel!

Rachel Wallis <rwallis@withersrogers.com> on Monday, May 14, 2007 at 10:25 AM +0000 wrote:

Thanks Sheryl. I was aware of this, and am trying to get a response from the client.

If there is anything we can do to assist following Amy's departure, please let me know.

Best regards

Rachel

Rachel Wallis
Withers & Rogers LLP
t: 44 (0) 207 663 3500
f: 44 (0) 207 663 3550

"Sheryl Fox"
<sfox@kohnonline.
com>

Reply To

14/05/2007 15:09

To

rwallis@withersrogers.com
cc

Subject

US 10/575,117 Y/R P511580USPCT
O/F 3174-17

Hello Rachel,

I'm sure you've heard by now that Amy is no longer with our office. While going through files on her desk, the above appears to be awaiting communication from you with regard to inability to locate and/or obtain signature from co-inventor Alan Smith. If you would, please provide me with an update on the same so that I can docket our records accordingly for follow-up to you.




Also, just so you are aware, the formalities for the Declaration were timely due without surcharge May 1, 2007. Extensions with surcharges (at small entity rates) are available as follows:

June 1, 2007	\$60
July 1, 2007	\$225
August 1, 2007	\$510
September 1, 2007	\$795
October 1, 2007	\$1,080 (abandoned effective October 2, 2007, if not filed, but reinstatement may be available)


If you have any questions, please don't hesitate to let me know.

Kind regards,
Sheryl

-----Sheryl

From:  Sheryl Fox 
Subject: USSN 10/575,117 Y/R P511580USPCT O/F 3174-18
To:  Rachel Wallis
Cc:



Attachments:  3174-17 FINAL DEADLINE NOTICE.pdf

46K

Hi Rachel,

The final deadline for responding to the Notice of Missing Parts re Alan Smith's signature (lack thereof) on Dec is Monday, October 1, 2007.

Please confirm your receipt hereof and advise how/if we are to proceed.

Kind regards,
Sheryl

Sheryl M. Fox
Office Administrator
KOHN & ASSOCIATES, PLLC
30500 Northwestern Highway, Suite 410
Farmington Hills, MI 48334-3179 USA
Direct Dial: +1-248-539-5066
Fax: +1-248-539-5055
URL: www.kohnandassociates.com
E-mail: sfox@kohnonline.com

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From: Sheryl Fox

Subject: USSN 10/575,117 Y/R P511580USPCT O/F 3174-17

To: Rachel Wallis

Cc:

REMINDER: August 6, 2007

----- Original Message -----

Hi Rachel,

Following up with regard to the status of signature for Alan Smith re the above matter.




Thanks,
Sheryl

Sheryl M. Fox
Office Administrator
KOHN & ASSOCIATES, PLLC
30500 Northwestern Highway, Suite 410
Farmington Hills, MI 48334-3179 USA
Direct Dial: +1-248-539-5066
Fax: +1-248-539-5055
URL: www.kohnandassociates.com
E-mail: sfox@kohnonline.com

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9-28-07
Final Deadline
Oct 1, 2007
then case is
abandoned -
PLEASE
confirm.

From:  Sheryl Fox 
Subject: USSN 10/575,117 Y/R P511580USPCT O/F 3174-17
To:  Rachel Wallis
Cc:



Hi Rachel,

Following up with regard to the status of signature for Alan Smith re the above matter.

Thanks,
Sheryl

Sheryl M. Fox
Office Administrator
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Farmington Hills, MI 48334-3179 USA
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ASSIGNMENT

For the sum of One Dollar (\$1.00) and other good and valuable consideration, receipt of which is hereby acknowledged, we, Alan Smith of Forest Gate, London, and Peter O'Toole of Panmure Close, London, do hereby assign, sell, and set over to Janile Limited organized and existing under the laws of the United Kingdom and having a business at 25a Bromfelde Road, London SW4 6PP, hereinafter referred to as ASSIGNEE, its successors, assigns or other legal representatives, the entire right, title and interest, domestic and foreign, in and to the inventions and discoveries in:

EXTENDIBLE MAST

set forth in the application for United States Letters Patent, Serial No. _____, filed _____, including the right of said ASSIGNEE, its successors, assigns or other legal representatives to make applications and to receive Letters Patent for said inventions and discoveries in any and all foreign countries in its or their own name or names, or in our names, at its or their election, and we hereby assign, sell and set over to said ASSIGNEE, its successors, assigns or other legal representatives, all rights of priority in and to said inventions and discoveries in all countries.

And we hereby agree for ourselves, our heirs, successors, assigns or other legal representatives to execute all papers, including applications for Letters Patent of any and all kinds and in any and all countries and to perform any and all acts which said ASSIGNEE, its successors, assigns or other legal representatives may deem necessary to secure thereto the rights herein assigned, sold and set over.

And we hereby represent and warrant that we have not granted any rights inconsistent with the rights granted herein.

IN WITNESS WHEREOF, we hereunto set our hands and seal.

Witness

Law Regoroun

Witness

John C. Reel

Alan Smith

P. O'Toole

Peter O'Toole

Declaration and Power of Attorney For Patent Application

English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name,

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

EXTENDIBLE MAST

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on _____ as United States Application No. or PCT International Application Number _____ and was amended on _____

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Claimed

0323697.3

GB

09.10.2003

☒

(Number)

(Country)

(Day/Month/Year Filed)

☐

(Number)

(Country)

(Day/Month/Year Filed)

☐

(Number)

(Country)

(Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

_____ (Application Serial No.)	_____ (Filing Date)
_____ (Application Serial No.)	_____ (Filing Date)
_____ (Application Serial No.)	_____ (Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

<u>PCT/GB2004/004328</u> (Application Serial No.)	<u>11 October 2004</u> (Filing Date)	<u>Pending</u> (Status) (patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status) (patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status) (patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status) (patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status) (patented, pending, abandoned)
_____ (Application Serial No.)	_____ (Filing Date)	_____ (Status) (patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. *(list name and registration number)*

Kenneth I. Kohn, Reg. No. 30,955

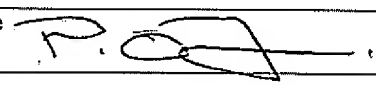
Deborah J. Barnett, Reg. No. 31,844

Amy E. Rinaldo, Reg. No. 45,791

Send Correspondence to: **Kenneth I. Kohn**
KOHN & ASSOCIATES, PLLC
30500 Northwestern Highway, Suite 410
Farmington Hills, Michigan 48334

Direct Telephone Calls to: *(name and telephone number)*
Kenneth I. Kohn (248) 539-5050

Full name of sole or first inventor ALAN SMITH	
Sole or first inventor's signature	Date
Residence Thornegrove and Aljon Engineering, 108-118 Wellington Road, Forest Gate, London E7 8BU	
Citizenship GB	
Post Office Address Same as above	

Full name of second inventor, if any PETER O'TOOLE	
Second inventor's signature 	Date
Residence 1 Jack Walker Court, Panmure Close, London N5 1SG	
Citizenship GB	
Post Office Address Same as above	

ASSIGNMENT

THIS ASSIGNMENT is made the 3rd day of October 2003 BETWEEN Thornegrove and Aljon Engineering of 108-118 Wellington Road, Forest Gate, London, E7 8BU (hereinafter called "the Assignor") of the one part and Janile Ltd of 25a Bromfelde Road, London, SW4 6PP (hereinafter called "the Assignee") of the other part.

WHEREAS:

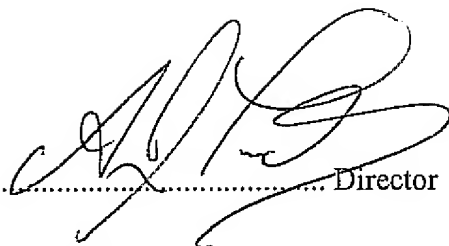
- (a) The Assignor and Assignee are the joint proprietors of an invention entitled Extendible Mast (hereinafter referred to as "the Invention"), as defined in the attached specification.
- (b) The parties hereto have agreed that all right, title and interest in the invention should be transferred from the Assignor to the Assignee for the consideration hereinafter set forth.

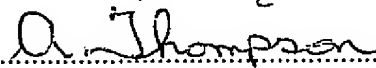
NOW THIS ASSIGNMENT WITNESSETH as follow:

In consideration of the sum of £1.00 (one pound Sterling) now paid by the Assignee to the Assignor (the receipt of which the Assignor hereby acknowledges) the Assignor hereby assigns to the Assignee with title guarantee all right title and interest in the invention to the intent that any patent granted in pursuance of the invention shall be granted in the name of the Assignee and all rights, powers, liberties and immunities conferred by the grant of the patent free from all incumbrances and including the right to sue for past and future infringements of the patent TO HOLD unto the Assignee absolutely and the Assignor hereby undertakes at his own expense to do all acts and execute all documents necessary or desirable for securing and executing all rights in or under said patent and for assuring the title of the Assignee to the patent.

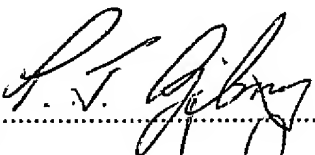
IN WITNESS whereof the parties have executed this Assignment the day and year first above written.

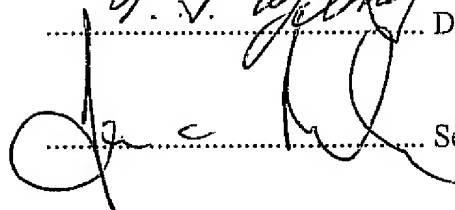
Signed by Thornegrove & Aljon Engineering

.......... Director

.......... Secretary

Signed by Janile Ltd

.......... Director

.......... Secretary

ANNEX 1

Extendible Mast

The invention relates to an extendible mast particularly for supporting a camera.

5

When a builder needs to assess a roof, or the upper part of a building he usually needs to erect and mount scaffolding in order to gain access to the part to be assessed. Often he will find that there is a problem with part of the roof, that the roof requires maintenance work, but that in order to have the best access to that part of the roof he needs to move the scaffolding. This is time consuming and increases the overall cost of the maintenance work. It would be helpful to have a way of assessing the roof, or upper part of a building without having to erect and mount scaffolding or directly access the roof.

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Masts and other support units for supporting detection devices such as cameras, lights, infra red detectors and smoke or chemical pollution detectors are known in the art. Cameras may be mounted on large tripods, or on cranes, and are sometimes mounted on masts on vehicles. However such support units have two main disadvantages. The support units are either too unstable to be used above a certain height, the unit being susceptible to serious damage by wind, and being incapable of accurately positioning the camera; or are too cumbersome to be easily portable. In order to be strong enough to withstand windy conditions the support units are heavy. This makes them difficult to transport and erect. Hence some of the support units are mounted on vehicles. This solves the problem of transporting the support unit, but, due to the size of the vehicle, limits the locations in which the support unit can be used. For example, the support unit cannot be used in narrow passageways between buildings. Vehicle-mounted masts are expensive because, to the cost of the mast must be added the cost of buying and maintaining the vehicle. It would be useful to have a support unit, which could be used to mount a camera, which is both strong and easily portable without a vehicle.

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The invention provides a freestanding, portable, extendible mast arranged to support a detection device, comprising a plurality of telescopic sections each being moveable

between a stored position and an extended position, wherein the mast is between 30 feet (8.5m) and 130 feet (37m) in length when all the sections are fully extended.

- 5 By freestanding it is meant that the mast does not need to be mounted on a separate base or vehicle.

By portable, it is meant that the mast can be moved, at least for short distances, by hand, without needing a vehicle.

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By telescopic, it is meant that the sections of the mast overlap, and the amount of overlap may be altered between the stored and extended positions.

- Such a mast may be used to raise a camera, or other device above a roof or alongside a building, or into the canopy of a tree to allow the area to be viewed without erecting scaffolding.
- 15

- Preferably the mast is between 50 feet (14m) and 100 feet (28m) in length when all the sections are in the elongated position, more preferably between 65 feet (18.5) and 85 feet (24.5). The mast preferably weighs between 2.5 and 3.5 hundred weight, more preferably approximately 3 hundred weight which allows it to be carried by one or two people.
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- The mast preferably has up to 10 sections, most preferably between 5 and 8 sections.
- 25 The sections are preferably substantially equal in length, and fit one inside another. The diameters are chosen such that the sections can be moved in relation to one another, that is to say the sections do not fit tightly together. The diameter of the widest section is preferably between 5 and 9 inches wide, more preferably between 6 and 8 inches wide. Most preferably it is 7 inches wide. Each section is preferably between 11 and 13 feet in length. When elongated there is preferably between 1 and 3 feet of overlap between one section and another.
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Preferably the mast is moveable between the stored position and the extended position by hand. The mast is preferably provided with a hand driven drive mechanism, most preferably a chain and sprocket wheel arrangement to allow extension of the sections.

5 The chain and sprocket wheel arrangement preferably comprises a chain and two sprocket wheels and may include a cranked handle which can be used to turn one of the sprocket wheels, and hence drive the chain. The handle may be linked directly to one of the sprocket wheels, or may be linked to a transfer unit by a second similar chain. The transfer unit includes first and second sprocket wheels which rotate together. The first
10 wheel is turned by the second chain, and the second wheel drives the first chain. Turning the first sprocket wheel with the second chain turns the second sprocket wheel. The drive mechanism may be geared by using first and second sprocket wheels of different sizes to make extending the sections easier. Alternatively the drive mechanism may include hydraulic apparatus for extension of the sections.

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The drive mechanism also preferably includes a braking mechanism, to allow the mast to be extended or returned to the stored position safely. The brake mechanism may be applied when a section is partially extended, to prevent the section falling back towards the stored position. The mechanism may be a simple brake which can be applied to the
20 drive mechanism. For example, when the drive mechanism is a chain and sprocket, the braking mechanism may be in the form of a ratchet pawl which engages the chain to prevent the section from dropping.

Each section, with the possible exception of the innermost section, is preferably
25 provided with a longitudinal slot, in the section wall, to provide access to the inner sections. The apertures are aligned with one other. Further each of the sections, except the outermost, is preferably provided with an aperture for receiving a pin to link the sections to the drive mechanism in order to extend them. In the most preferred embodiment, each section except the innermost section has a longitudinal slot on
30 diametrically opposing sides so that the pin can pass right through the mast. Also in the most preferred embodiment each section except the innermost section has an aperture on diametrically opposing sides so that the pin can pass right through the mast.

In the preferred embodiment, not only do the longitudinal slots align, but the apertures also align with those slots. In addition, the apertures are arranged such that, when the mast is in the stored position, the apertures of each of the sections are arranged so that each of them can be seen separately through the slot in the outermost section. The
5 aperture of the innermost section is arranged at the top so that it will be the first section to be lifted by the pin. Each aperture beneath that of the innermost section corresponds to the next outermost section.

The drive mechanism preferably includes a linker in the chain for linking the
10 mechanism to section to be extended. The linker has a body provided with an aperture for receiving a pin, which can be inserted through the linker and into the aperture in the section to be raised.

The lower end of each section is preferably provided with a sill, which protrudes from
15 the outer circumference of the section. The sill is preferably approximately 1 inch wide. The sill aids in stabilising the mast as it provides contact between a section and the corresponding lower section to reduce lateral movement between the sections, particularly when extended.

20 The sections of the mast are preferably moveable between the stored position to the elongated position one at a time. Once each section is fully extended it can preferably be locked in place. Any standard locking mechanism may be used. For example a bolt may be passed through an aperture in the top of a lower section and an aperture in the bottom of the upper section. Preferably the locking mechanism comprises a pin which
25 is passed through an aperture in the top of a lower section and a corresponding aperture in an upper section. The sections are preferably provided with further apertures, which are diametrically opposite the first apertures allowing the pin to pass right through the mast.

30 The mast preferably further comprises a base, upon which the mast may be stood. The base may include handles to allow the mast to be easily moved. For the same purpose the base may also be mounted on wheels, particularly castors, or on a trolley. The base

is preferably at least 20 inches in length and width, more preferably 24 inches, to provide stability. For further stability the mast may be provided with guide wires for attachment to the ground or to a building.

- 5 The sections of the mast are preferably made of aluminium to make the mast reasonably light. The base is preferably made of steel for strength.

The inner section is preferably provided with a mounting for a camera or other device. The mounting is preferably rotatable and preferably can be controlled remotely to pan
10 and tilt.

Preferably the mast also comprises a camera, particularly a video camera. The camera is preferably mounted on the inner section of the mast, more preferably via a rotatable mounting. Alternatively the mast may comprise a light, an infra red detector or a smoke
15 or chemical pollutants detector, or other detection equipment.

The invention further provides an extendible mast comprising a plurality of telescopic sections, moveable between a stored position and an extended position, each section being provided with a longitudinal slot, and an aperture; the mast further comprising a
20 chain and sprocket drive mechanism for extending the sections, the chain including a linker for connecting the chain to the section to be extended. The linker may comprise a body having an aperture. Preferably, a pin is inserted through linker aperture into the aperture in the section to be extended.

- 25 A specific embodiment of the invention will now be described by way of example only, with reference to the drawings in which:

Figure 1 shows a mast according to the invention in the stored position;

Figure 2 shows a mast according to the invention in a partially extended position; and

- 30 Figure 3 shows the mast of figure 2 with an alternative drive mechanism.

Referring first to Figure 1, the mast 5 comprises a plurality of telescopic sections 10a, 10b, 10c, and 10d. The sections 10a, 10b, 10c and 10d are cylindrical and are of decreasing diameter such that they fit inside one another as shown. The mast further comprises a base 12, which has handles, 14, so the mast may be easily carried. Each section 10a, 10b, 10c and 10d, except the innermost section 10d is provided with a longitudinal slot 16, which allows access to the inner sections 10b, 10c, and 10b for extending the mast. The longitudinal slots 16 of each section are aligned. The inner sections 10b, 10c and 10d are also provided with an aperture 17, which allows attachment of the section to a drive mechanism (not shown in Figure 1) which is used to extend the mast.

The aperture 17 of each section also aligns with the slot 16 in the outermost section 10a. This allows access to the apertures 17 to enable the sections to be lifted. Both the slots of each section and the apertures of each section may include corresponding slots or apertures on the diametrically opposite side of each section so that, as will be explained below, when a pin is inserted through an aperture 17, it passes through the opposite side of the mast. The mast can operate with or without the slots and apertures at the far side of the mast as appropriate. It will be appreciated that the slots in the sections allow the inner sections to be lifted since they allow access to the apertures 17 of the innermost sections.

Figure 2 shows the mast 5, in a partially extended position. The mast in Figure 2 has three sections, the innermost section, 10c has been fully extended. The sections are raised one at a time using a sprocket wheel 18 and chain 20 drive mechanism. The mechanism additionally includes an idler sprocket wheel 19 around which the chain passes. Thus, the chain 20 passes over the sprocket wheel 18 and the idler sprocket wheel 19. A handle 22 is provided to turn the sprocket wheel 18 and drive the chain. In the first embodiment the handle 22 is attached to the sprocket wheel 18. An alternative embodiment is shown in Figure 3.

The chain 20 includes a linker 34 to connect the chain to the section to be raised. The linker 34 includes an aperture through which a pin 36 can be passed. The pin 36 is then

inserted into the aperture 17 in the section to be raised connecting the linker and section.

Once a section is extended it is locked in place using a bolt 24 and aperture 26. The bolt 24 is passed through an aperture 26 in the top of the lower section 10b and aperture 26 in the bottom of the upper section 10c.

The sections are provided with a pin 24 and aperture 26 to lock each section into place when fully extended.

Figure 3 shows an alternative embodiment, in which a second drive chain 28 and a handle are provided. The sprocket wheel 18 which has been described in Figure 2 forms part of a transfer unit. In addition, the transfer unit includes a second sprocket wheel 30 which is connected to the main sprocket wheel 18. The two sprocket wheels are fixed together and rotate together. This means that, if the second sprocket wheel 30 is rotated, the main sprocket wheel 18 will also turn at the same speed. This turns the drive chain 20. The second drive chain 28 passes over the second sprocket wheel 30 and over a handle sprocket wheel 33 which is turned by a cranked handle. Thus, as the cranked handle is turned, the handle sprocket wheel 33 is turned which drives the second drive chain 28 around the second sprocket wheel 30 within the transfer unit. This in turn drives the main sprocket wheel 18 to move the chain 20. In this embodiment it is possible to include one or more gears by altering the size of the second sprocket 30 in comparison with the main sprocket. This can make extending the sections easier, particularly if the mast has a large number of sections.

A camera (not shown) is mounted to the inner section of the mast. The camera is mounted on a rotatable mounting and arranged to tilt and pan in order to survey an area. The mast is extended to the required height and the camera used to record the area under investigation.

In use, a camera is mounted onto the inner section 10c. The pin 36 is inserted through the linker 34 into the aperture 17 in the inner section 10c connecting the linker 34 to the

section 10c. The handle 22 is turned, driving the chain 20 and lifting the linker 34, and hence the section 10c. Once the section 10c is fully extended, the bolt 24 is inserted through apertures 26 in the bottom and top of the inner and middle sections (10c and 10b), respectively. The pin 36 is removed from the linker 34 and the handle 22 turned
5 to lower the linker 34. It is then joined to the middle section 10b and that section raised in the same way.

Once the mast is fully extended guide wires, not shown, are used to tether the mast.

Claims

1. A freestanding, portable, extendible mast arranged to support a detection device,
comprising a plurality of telescopic sections each being moveable between a stored
5 position, and an extended position, wherein the mast is between 30 and 130 feet in
length when all the sections are in the elongated position.
2. An extendible mast according to claim 1 which comprises between 5 and 8 sections.
- 10 3. An extendible mast according to claim 1 or 2, wherein the sections of the mast are
moveable between the stored position and elongated position by hand.
4. An extendible mast according to any of claims 1 to 3, wherein the mast further
comprises a drive mechanism for moving the sections between the stored and
15 elongated positions.
5. An extendible mast according to claim 4 wherein the drive mechanism is a chain
and sprocket wheel apparatus.
- 20 6. An extendible mast according to any preceding claim wherein the sections are
moveable between the stored and extended positions, one at a time.
7. An extendible mast according to any preceding claim, further comprising a locking
mechanism for locking sections in place once the sections have been moved from
25 the stored position to the extended position.
8. An extendible mast according to any preceding claim further comprising a base.
9. An extendible mast according to any preceding claim upon which a camera is
30 mounted.

10. An extendible mast comprising a plurality of telescopic sections, moveable between a stored position and an extended position, each section being provided with an longitudinal slot, and an aperture; the mast further comprising a chain and sprocket wheel drive mechanism for extending the sections, the chain including a
5 linker for connecting the chain to the section to be extended.

11. The extendible mast according to claim 10 wherein the linker comprises a body and an aperture, and wherein use, a pin is inserted through the linker aperture into the aperture in the section to be extended.

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12. An extendible mast substantially as described herein, with reference to the drawings.

ABSTRACT

Extendible Mast

- 5 The invention relates to a extendible mast, particularly for supporting a camera.

FIG 1

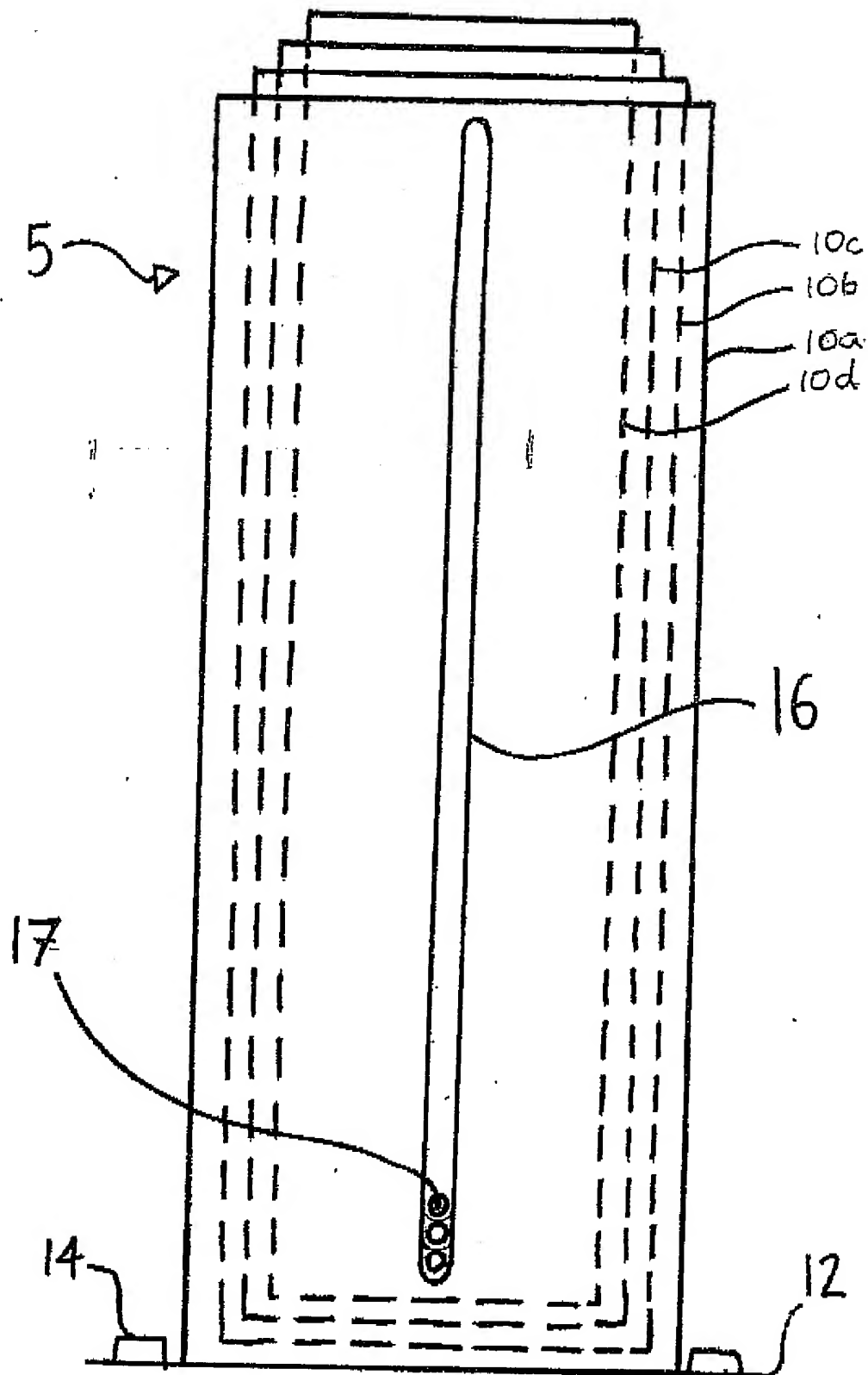


FIG 2

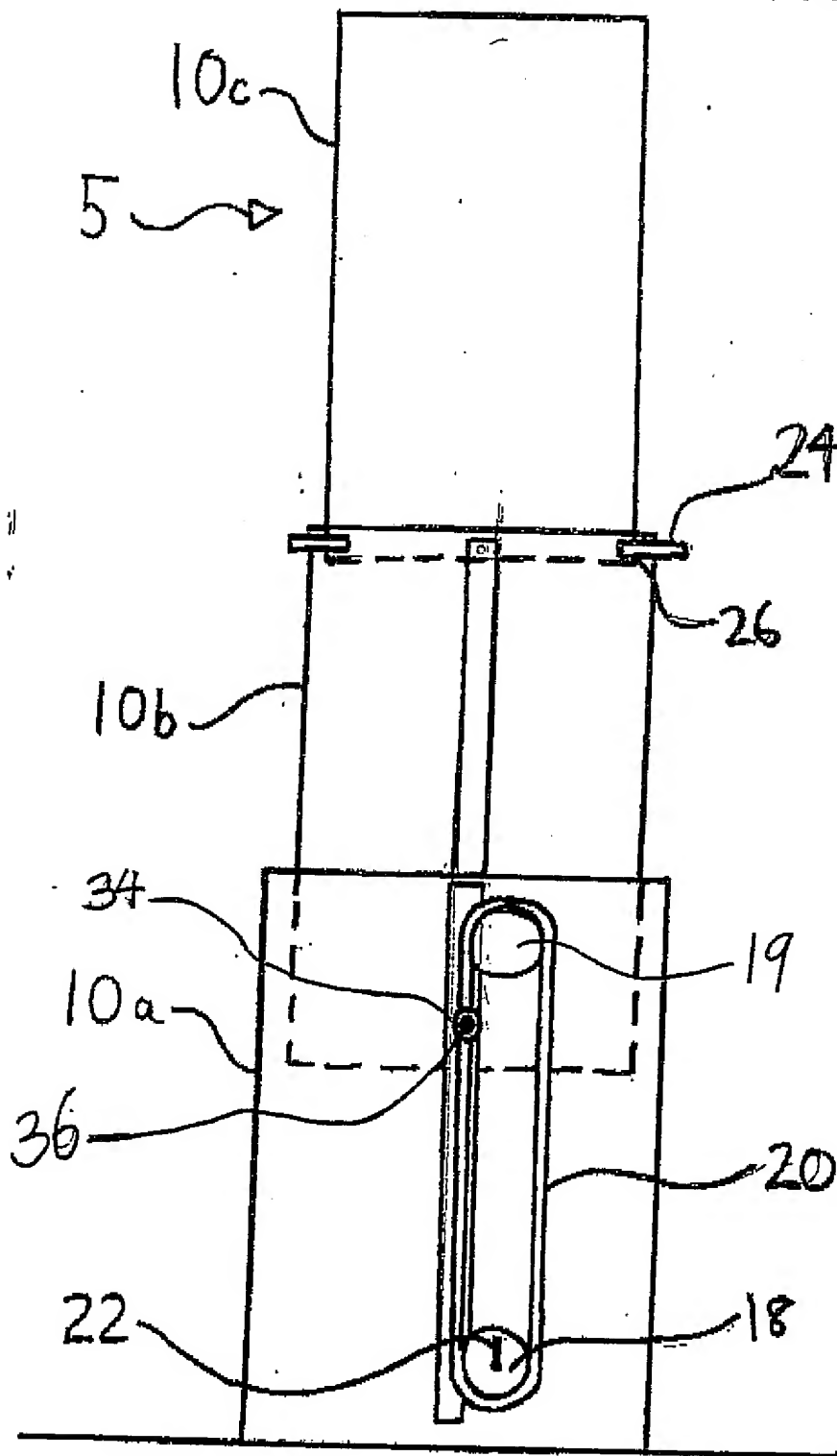


FIG 3

